REMARKS

Claims 1-8 and 10-35 remain pending in the instant application. All claims presently stand rejected. Claims 1, 4, 5, 12, 17, 20, 21, and 31-33 are amended herein. New claim 35 is hereby added and claim 9 is canceled. Entry of these amendments and reconsideration of the pending claims are respectfully requested.

Drawings

The Office Actions mailed on January 10, 2007 and June 15, 2007 did not indicate whether the drawings are acceptable or objectable to the Examiner. Accordingly, Applicants respectfully request an indication from the Examiner whether the drawings are accepted.

Specification

The disclosure presently stands objected to because the specification includes embedded web addresses. Accordingly, Applicants have amended paragraphs [0054], [0055], and [0058] to remove such embedded web addresses. Thus, Applicants respectfully request withdrawal of the objection to the specification.

Claim Rejections – 35 U.S.C. § 103

Claims 1-34 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Pung (US 2002/0150099) in view of Xiong (US 6,671,256).

"To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. All words in a claim must be considered in judging the patentability of that claim against the prior art." M.P.E.P. § 2143.03.

Claims 1, 20 and 31

Amended claim 1 recites:

> A method for establishing a reservation of a lightpath traversing a plurality of connected lightpath segments between

source and destination nodes in an optical switched network, comprising:

making a soft reservation of node resources supporting respective lightpath segments from among the plurality of lightpath segments, the soft reservation of the node resources corresponding to a ***future scheduled*** **time period** for which the lightpath is requested to be reserved, wherein the future scheduled time period includes a **scheduled *start time***;

determining if adequate node resources are available for reservation during the future scheduled time period to support traversal of the entire lightpath; and

making a hard reservation to commit node resources corresponding to the future scheduled time period if adequate node resources are determined to be available.

Thus, amended claim 1 expressly recites making a soft reservation that corresponds to a *future scheduled* time period which includes a scheduled *start time*. Applicants respectfully submit that the cited references, whether taken singularly or in combination fail to disclose teach or suggest this feature as is more fully explained below.

By way of review, Applicants kindly direct the Examiner's attention to paragraph [0097] of Applicants' specification. Here, Applicants disclose that time period reservations corresponding to future scheduled uses of lightpaths made up of multiple lightpath segments can be made. That is, at any particular time a reservation may be made for future scheduled use of a lightpath. For example, at 9:00AM a reservation of a particular lightpath may be established such that the lightpath is reserved for use at 12:00PM. In other words, the lightpath is reserved for a future use.

Attention is further directed to reservation table 1700 depicted in FIG. 17A. Here, Applicants disclose an embodiment of a reservation table that is stored at each node in the lightpath. As can be seen from the entries in reservation table, several reservations for of a lightpath (e.g., lightpath segment ID 1) are shown. For example, lightpath segment ID 1 is shown in the first row as reserved from 12PM to 3PM (i.e., 15:00:00). However, lightpath segment ID 1 is also shown in the second row as reserved from 11AM to 12PM. Thus, FIG. 17A illustrates an embodiment where *future* uses of a lightpath may be established with such a reservation table having start and end times.

This is in contrast to the references cited in the present office action. In particular, both Pung and Xiong disclose reserving node resources for immediate use, not for future use, as expressly claimed by Applicants.

To be sure, Pung generally discloses a method of multicast routing. With reference to FIGS. 12A-12B, Pung discloses that a host A (14a) requests a multicast QoS connection to source B (14b). Pung, [0100]. Host A is disclosed as sending a request packet Req(A,A,a) to node 12a. This request packet is then forwarded along the network until it reaches source B (14b). Pung discloses that when source B receives the request packet and decides to accept the connection request it sends back a confirm packet (CF(A,B,E)) immediately. Pung, [0102]. **Once the confirm packet is received at host A (14a), Pung discloses that a muticast QoS connection is then established between hosts B and A.** Pung, [0104]. Pung also discloses that the resources of each node are reserved upon receipt of the confirm packet. Pung, [0019]. Thus, in essence, Pung discloses sending a request packet from node to node until the source is reached and then sending back a confirm packet. However, when the confirm packet is received at each node, the node's resources are **immediately** allocated to support the multicast QoS connection as disclosed by Pung. Pung fails to disclose making a soft reservation of node resources that corresponds to a *future scheduled* time period. **In fact, there is no scheduling at all in Pung because Pung discloses that the resources of a node are allocated upon receipt of the confirm packet.**

Xiong does not cure the deficiencies of Pung. For example, Xiong explicitly states "[t]he actual reservation of the data channels 205 along the optical path is made by the first burst of the burst flow sent from electronic ingress edge router E1 on outbound data channel LAMDA1". Thus, Xiong discloses that the node's resources are immediately allocated upon the start of transmission. There is simply no mentioning of reserving node resources for a *future scheduled* time period in Xiong.

Furthermore, in the interest of expediting a timely notice of allowance, Applicants have further amended claim 1 to recite in pertinent part, *"...wherein the future scheduled time period includes a **scheduled start time...**"*. Nowhere, in either of the cited references do they disclose, teach or suggest a scheduled start time. In fact, there is no need for a scheduled start time in either reference. For example, Pung

discloses **immediately** allocating node resources to support the multicast QoS connection. Since Pung discloses that node resources are immediately allocated there is no need to have a scheduled start time. That is, the QoS connection is established **immediately**, not at a *scheduled* start time. Similarily, since Xiong discloses that the reservation of data channels are not made until the first burst of the burst flow is transmitted there is also no need for a scheduled start time. That is, Xiong disclose allocating resources as soon as data is transmitted.

Since Pung and Xiong fail to disclose, teach or suggest making a reservation of node resources corresponding to a future scheduled time period where the future scheduled time period includes a scheduled start time, the references fail to disclose each and every element of claim 1, as required under M.P.E.P. §2143.03. Independent claims 20 and 31 include similar nonobvious elements as independent claim 1. Accordingly, Applicants respectfully request that the §103(a) rejections of claims 1, 20 and 31 be withdrawn.

Dependent Claims 2, 3, 6-8, 11, 15, 22-26, and 34

If an independent claim is non-obvious under 35 U.S.C. §103, then any claim depending therefrom is also non-obvious. MPEP §2143.03; *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988). As discussed above, claims 1, 20, and 31 are in condition for allowance. Applicants respectfully submit that claims 2, 3, 6-8, 11, 15, 22-26, and 34 are therefore allowable by virtue of their dependence on allowable independent claims, as well as by virtue of the features recited therein. **Furthermore, Applicants assert that for at least the reasons explained below, the §103 rejections fail to establish a *prima facie* case of obviousness.**

Official Notice

In the Office Action, mailed January 10, 2007 the Examiner took Official notice to several features of Applicants' dependent claims. In Applicants' response mailed March 20, 2007, Applicants' traversed the Examiner's assertions and requested evidence in support of the Examiner's position. Specifically, **Applicants requested that the**

Examiner provide a reference or affidavit pursuant to M.P.E.P. §2144.03 to support his assertions. However, in the present office action, mailed June 15, 2007 no additional references or affidavits have been presented by the Examiner to support the Examiner's assertions of common knowledge. Instead, Official notice is again taken by the Examiner to those same features where official notice was taken in the January 10, 2007 Office Action.

Applicants kindly note that presentation of objective evidence to support an Examiner's assertion of common knowledge is not discretionary when called upon by Applicant. Rather, MPEP §2144.03C states "*If Applicant challenges a factual assertion as not properly officially noticed or not properly based upon common knowledge, the Examiner* ***must*** *support the finding with adequate evidence.*" Thus, the MPEP requires the Examiner to provide objective Evidence to support assertions of common knowledge when challenged by Applicant. Since, no objective evidence has been provided, Applicants respectfully request withdrawal of the rejection of each dependent claim where official notice was taken.

Claims 2, 3, 22, 23, and 34

Examiner acknowledges that Pung fails to disclose, teach, or suggest all limitations of claims 2, 3, 22, 23, and 34 by stating "...Pung differs from the claimed invention in that Pung fails to specifically teach that the optical switched network comprises a photonic burst switched network or a wavelength division multiplexed PBS network." Office Action, mailed 6/15/07, p. 3. However, Examiner continues by stating "...both types of optical switched networks are well known in the art and Official Notice is given to that effect." Whether or not photonic burst switched or WDM PBS networks were well known in the art, Applicants respectfully assert that the rejection still fails to establish a *prima facie* case of obviousness because no objective evidence has been provided to establish a motivation to combine or that there would be a reasonable expectation of success to combine Pung with the claimed photonic burst switched or WDM PBS networks.

The Examiner states on page 3 of the Office Action "[o]ne skilled in the art would have been motivated to employ Pung's reservation methodology to a photonic

burst switched network or a wavelength division multiplexed PBS network in order to efficiently route multicast signals according to multiple QoS constraints (paragraph [0014])." However, paragraph [0014] of Pung makes no mention of optical switched networks, much less a photonic burst switched or WDM PBS networks. Thus, the rejection fails to provide any **objective evidence** to show that there is a motivation to combine the teachings of Pung with Applicants' claimed optical switched networks. The Examiner has further failed to provide any **objective evidence** or any reasoning as to exactly how an optical switched network, as claimed by Applicants', would be incorporated into the teachings of Pung. Thus, the rejection further fails to establish a reasonable expectation of success, as required by M.P.E.P. §2143. Applicants kindly direct the Examiner to MPEP §2143.01, which points out that a statement that modifications to the cited reference would have been well within the ordinary skill of the art at the time the claimed invention was made ***is insufficient*** to support an obviousness rejection.

Therefore, the Examiner appears to rely on personal knowledge without providing any supporting evidence in the rejection of claims 2, 3, 22, 23, and 34. Applicants respectfully traverse the Examiner's assertions and request evidence in support of the Examiner's position. M.P.E.P. §2144.03. **Again, Applicants respectfully request that the Examiner provide a reference or affidavit pursuant to M.P.E.P. §2144.03** to support his assertions that (1) photonic burst switched networks and WDM PBS networks were known at the time of Applicants' invention; (2) that one skilled in the art would have been motivated to combine the teachings of Pung with the claimed optical switched networks; **and** (3) that there is a reasonable expectation of success to combine Pung with the claimed optical switched networks. Absent such a showing, Applicants respectfully assert that claims 2, 3, 22, 23, and 34 are nonobvious and therefore allowable.

Claims 4 and 32

Dependent claim 4, as amended, recites, in pertinent part, "...storing resource reservation data at each node, including resource reservation status indicia indicating whether a resource has a corresponding soft or hard reservation and time values

specifying the scheduled start time and a scheduled end time of the future scheduled time period. ..." Not only do Pung and Xiang fail to disclose the reservation of lightpaths for a future scheduled time period, as described above, the cited references also fail to disclose storing time values specifying the scheduled start time and a scheduled end time for the scheduled time period at each node, as is more fully explained below.

In the Office Action mailed June 15, 2007, the Examiner states that time values specifying the start and end of the scheduled time period are **inherent** in a reservation of Pung. Applicants respectfully disagree.

The Examiner must provide a rationale or evidence tending to show that a feature is inherent in the reference. (M.P.E.P. § 2112.) The mere fact that a certain characteristic may be present in the reference is not sufficient to establish the inherency of that feature. (M.P.E.P. § 2112 *citing In re Rijckaert*, 9 F.3d 1531 (Fed. Cir. 1993). (Emphasis in original.) To establish inherency, the extrinsic evidence must make clear that the missing feature is necessarily present in the thing described by the reference and that persons of ordinary skill would recognize that the feature is necessary. (M.P.E.P. § 2112 *citing In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999).

Applicants submit that each and every element of the claim 4 is not found in the cited references either expressly or inherently. As discussed above, Pung generally discloses a method of multicast routing where once the confirm packet is received at host A (14a), a muticast QoS connection is immediately established between hosts B and A. Pung, [0104]. That is, the node's resources are immediately allocated to support the multicast QoS connection as disclosed by Pung. Since Pung discloses immediately allocating a node's resources once a confirm packet is received it necessarily fails to disclose storing time values specifying the scheduled start time and a scheduled end time for the scheduled time period at each node.

The mere fact that the time values may be present in the system of Pung is not sufficient to establish that storage of them at each node is inherent in Pung. This is because inherency may not be established by probabilities or possibilities.

Xiong fails to cure the deficiencies of Pung. For example, the Examiner cites to column 4, lines 66-67, column 5, lines 1-15, and column 6, lines 25-30 of Xiong.

However, the **identical invention** must be shown in as **complete detail** as is contained in the claim." M.P.E.P. §2131 (citing *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226 (Fed. Cir. 1989)). Nowhere in this cited portion of Xiong, or anywhere else in Xiong, does this reference disclose, teach or suggest storing a scheduled start time and end time of a future scheduled time period at each node.

Dependent claim 32 includes similar nonobvious elements as dependent claim 4 and is therefore allowable for the same reasons as provided above in support of claim 4 in addition to adding further limitations of its own. Accordingly, claims 4 and 32, as amended, are nonobvious over the cited reference for these reasons and Applicants respectfully request withdrawal of the §103 rejections of these claims.

Claims 6, 7, and 24

Examiner acknowledges that Pung fails to disclose, teach, or suggest all limitations of claims 6, 7, and 24 by stating "...Pung differs from the claimed invention in that Pung fails to specifically teach the use of GMPLS based labels." Office Action, mailed 6/15/07, p. 4.

Similar to the §103 rejection above, the Examiner has failed to provide any objective evidence to support the rejection of claims 6, 7, and 24 and has simply stated "...the use of these labels are well known in the art and Official notice is given to that effect. One skilled in the art would have been motivated to employ a GMPLS based label in order to provide a framework for dynamic provisioning of connection in the optical network."

Applicants respectfully traverse the Examiner's assertions and request evidence in support of the Examiner's position. M.P.E.P. §2144.03. **Again, Applicants respectfully request that the Examiner provide a reference or affidavit pursuant to M.P.E.P. §2144.03** to support his assertions that (1) the use of GMPLS-based labels were known at the time of Applicants' invention; (2) that one skilled in the art would have been motivated to combine the teachings of Pung with the claimed GMPLS-based labels; **and** (3) that there is a reasonable expectation of success to combine Pung with the claimed GMPLS-based labels. Absent such a showing, Applicants respectfully assert that claims 6, 7, and 24 are nonobvious and therefore allowable.

Furthermore, claim 7 recites, in pertinent part, "...wherein the GMPLS-based label includes **at least one field identifying an input wavelength** employed for carrying signals over a lightpath segment identified by the GMPLS-based label." The rejection of claim 7 fails to account for the expressly recited limitation that the GMPLS-based label includes **a field identifying an input wavelength**. Nowhere in the cited reference or in the Offical Notice taken by Examiner is this limitation accounted for. Thus, the rejection further fails to establish a *prima facie* case of obviousness for failing to show all elements of claim 7.

Claims 8, 11, 25, and 26

Examiner acknowledges that Pung fails to disclose, teach, or suggest all limitations of claims 8, 11, 25, and 26 by stating "...Pung differs from the claimed invention in that Pung fails to specifically teach that the resource reservation request message comprises a Path/Resv message having a format based on an extension to the RSVP-TE (ReSerVation Protocol – Traffic Engineering) signal protocol." Office Action, mailed 6/15/07, p. 5.

Similar to the §103 rejections above, the Examiner has failed to provide any objective evidence to support the rejection of claims 8, 11, 25, and 26 and has simply stated "...PATH/RESV messages based on extensions to the RSVP-TE protocol are well known in the art and Official notice is given to that effect. One skilled in the art would have been motivated to use PATH/RESV messages in order to allow for bandwidth reservation in a peer-to-peer environment."

Applicants respectfully traverse the Examiner's assertions and request evidence in support of the Examiner's position. M.P.E.P. §2144.03. **Applicants respectfully request that the Examiner provide a reference or affidavit pursuant to M.P.E.P. §2144.03** to support his assertions that (1) the use of PATH/RESV messages based on extensions to the RSVP-TE protocol were known at the time of Applicants' invention; (2) that one skilled in the art would have been motivated to combine the teachings of Pung with the claimed PATH/RESV messages based on extensions to the RSVP-TE protocol; **and** (3) that there is a reasonable expectation of success to combine Pung with the claimed PATH/RESV messages based on extensions to the RSVP-TE protocol.

Absent such a showing, Applicants respectfully assert that claims 8, 11, 25, and 26 are nonobvious and therefore allowable.

Claim 15

Examiner acknowledges that Pung fails to disclose, teach, or suggest all limitations of claim 15 by stating "...Pung differs from the claimed invention in that Pung fails to specifically teach that the potential light paths are prioritized based on traffic balancing considerations." Office Action, mailed 6/15/07, p. 6.

Similar to the §103 rejections above, the Examiner has failed to provide any objective evidence to support the rejection of claim 15 and has simply stated "...prioritizing light paths based on traffic balancing considerations is well known in the art and Official Notice is given to that effect. One skilled in the art would have been motivated to prioritizing light paths based on traffic balancing considerations in order to efficiently balance the resources of the network among a plurality of users."

Applicants respectfully traverse the Examiner's assertions and request evidence in support of the Examiner's position. M.P.E.P. §2144.03. **Applicants respectfully request that the Examiner provide a reference or affidavit pursuant to M.P.E.P. §2144.03** to support his assertions that (1) prioritizing light paths based on traffic balancing considerations was known at the time of Applicants' invention; (2) that one skilled in the art would have been motivated to combine the teachings of Pung with the claimed prioritizing potential light paths based on traffic balancing considerations; **and** (3) that there is a reasonable expectation of success to combine Pung with the claimed prioritizing potential light paths based on traffic balancing considerations. Absent such a showing, Applicants respectfully assert that claim 15 is nonobvious and therefore allowable.

New claim 35

By way of this amendment, Applicants have added new claim 35. Claim 35 recites:

> *The method of claim 1, further comprising **waiting** until the scheduled start time to transmit a data burst along the hard reserved lightpath from the source node to the destination node.*

Applicants respectfully submit that the cited references fails to disclose, teach, or suggest waiting until the scheduled start time to transmit a data burst. For example, as described above, Pung discloses establishing a QoS connection immediately once the confirm packet is received. Similarily, Xiong fails to disclose waiting until the scheduled start time. Instead, Xiong discloses reserving node resources once immediately upon the start of transmission. Accordingly, Applicants respectfully submit that new claim 35 is patentable over the cited references for these reasons as well as those presented above in support of independent claim 1.

CONCLUSION

In view of the foregoing amendments and remarks, Applicants believe the applicable rejections have been overcome and all claims remaining in the application are presently in condition for allowance. Accordingly, favorable consideration and a Notice of Allowance are earnestly solicited. The Examiner is invited to telephone the undersigned representative at (206) 292-8600 if the Examiner believes that an interview might be useful for any reason.

CHARGE DEPOSIT ACCOUNT

It is not believed that extensions of time are required beyond those that may otherwise be provided for in documents accompanying this paper. However, if additional extensions of time are necessary to prevent abandonment of this application, then such extensions of time are hereby petitioned under 37 C.F.R. § 1.136(a). Any fees required therefore are hereby authorized to be charged to Deposit Account No. 02-2666. Please credit any overpayment to the same deposit account.

Respectfully submitted,

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